

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IB2004/050263

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01Q3/26 H01Q3/22 H01Q21/08 H01Q21/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01Q H04B G01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 726 662 A (HOPWOOD FRANCIS W) 10 March 1998 (1998-03-10) column 1, line 55 - column 2, line 45 column 3, line 54 - column 5, line 10; figures 1-5	1, 6, 10, 14
X	US 4 743 911 A (EVANS GARY E) 10 May 1988 (1988-05-10) abstract column 1, line 5 - column 2, line 20 column 3, line 51 - column 6, line 23; figures 3-7	1, 6
A	US 6 087 986 A (MUKAI MANABU ET AL) 11 July 2000 (2000-07-11) column 2, line 30 - column 3, line 22; figures 1-19	1, 6, 10, 14
	----- -/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

24 June 2004

Date of mailing of the international search report

02/07/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Angrabeit, F

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050263

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 911 442 A (HATCH WILLIAM B) 7 October 1975 (1975-10-07) abstract; figures 1-4 -----	1,6
A	US 2002/105463 A1 (VAIL DAVID KENYON ET AL) 8 August 2002 (2002-08-08) abstract; figures 1-4 -----	1,6
P,A	US 2003/142015 A1 (BOE ERIC N ET AL) 31 July 2003 (2003-07-31) column 1, paragraph 2 - paragraph 5; figures 1-4 -----	1,6

INTERNATIONAL SEARCH REPORT

International Application No
PCT/IB2004/050263

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5726662	A	10-03-1998	NONE	
US 4743911	A	10-05-1988	NONE	
US 6087986	A	11-07-2000	JP 3497672 B2 JP 10093323 A	16-02-2004 10-04-1998
US 3911442	A	07-10-1975	NONE	
US 2002105463	A1	08-08-2002	US 2002070893 A1 US 2002070894 A1 US 2002093453 A1 US 2002070898 A1 US 2002070897 A1 US 2002084934 A1 US 2002070895 A1 US 2002094010 A1	13-06-2002 13-06-2002 18-07-2002 13-06-2002 13-06-2002 04-07-2002 13-06-2002 18-07-2002
US 2003142015	A1	31-07-2003	NONE	